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ABSTRACT

A workplace literacy curriculum for entry-level hospital workers who sterilize medical equipment for doctors and nurses was developed, tested, and published in Harrisburg, Pennsylvania. An assessment was conducted to identify the needs of the hospital's management and the literacy skills needed by its central services prep department, and available instructional materials were reviewed and evaluated. A curriculum was then designed and written. The curriculum included lessons on the following topics: microbiology, soaps and detergents, procedures for cleaning patient supplies, procedures for cleaning machines, packaging, safety, general biology, and infection. Each lesson was developed to be self-contained. A pretest/posttest was also developed to help instructors identify employees requiring help in developing their work-specific vocabulary. Because the hospital could not release workers for a structured class, the lessons had to be presented to and reviewed by individual students who had attended the hospital's adult basic education/General Educational Development classes. The lessons were modified based on the feedback received. (MN)

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ED 382 831

Final Report

Project 98-4044

Central Services PREP

(A Curriculum for Sterilization Technicians in the Workplace)

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Central Services PREP

(A Curriculum for Sterilization Technicians in the Workplace)

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ABSTRACT PAGE

Title: *Central Services PREP (A Curriculum for Sterilization Technicians in the Workplace)*

Project No.: 98-4044 **Funding:** $14,352

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Purpose: This project developed, tested, and published a workplace literacy curriculum for entry level hospital workers who sterilize medical equipment for doctors and nurses.

Target Audience: The project is specific to hospital workers who are responsible for sterilizing equipment and supplies.

Procedures: For this project the procedures were as follows: **a)** assess the needs of the hospital management and the hospital Central Services Prep workers, **b)** review and evaluate available instructional materials and develop additional materials as needed, **c)** design and write a course curriculum, **d)** test the curriculum on hospital workers and modify the curriculum as needed, and **e)** disseminate project findings.

Summary of Findings: The objectives for this project were readily attainable. However, during the course of this project the method originally established to test the effectiveness of the curriculum developed under this project had to be modified. As a result statistical data (pre/post assessments) were incomplete. Nonetheless, available data supports that implementation of workplace specific curricula led to increased attainment of basic literacy and life skills by workers. Specifically, workers who participated in this workplace project increased their writing and life science skills.

Comments: The project participants concluded that job-specific workplace literacy can use the vocabulary, workplace situations, and available workplace literature to increase the basic skills of workers. Key to success with this workplace project is the total involvement of workers, supervisors, management, and the project implementor.

During the course of this project the participating hospital was unable to provide release time for hospital workers to attend a scheduled class. The class was designed to provide a comparison group for testing the designed curricula. As a result, students in a regular ABE class were used to test the curricula. The students used were Central Services Prep employees, but did not have the intensity of instructional delivery that was originally planned.

Products: Curriculum

Introduction

Over the last five years Tri-County Opportunities Industrialization Center, Inc. has worked closely with a local hospital. Both generic adult education and workplace specific course have been provided to hospital entry level workers. This project arose from a perceived need by both the hospital administration and OIC instructors.

Workers who were targeted for this project often attended GED test preparation classes or basic adult remediation classes. Students in theses classes were looking for skills that would make their jobs easier. Employers were looking to improve not only the basic literacy skills of the workers but their work attitudes and efficiency as well. The latter two not being literacy skills posed a challenge for the curriculum developer.

Not only did the project implementor have to attempt to teach the skills needed to do a good job as a sterilization technician, she had to try to affect the way the workers did their job by instilling in them a sense of pride and importance. As a result, the curricula developed is in a narrative formate that attempts to compare for the workers the skills that they do every day on their job with skills that they may perform off the job as well.

The project activities took place over a twelve-month period. Curriculum development continued beyond the formal scope of this project. Additional curricula material development continued because instructors did not have a formal opportunity to work with a control group of learners. As curricula was developed and tested on learners modifications were made.

Project staff included: Tabitha Morgan, who served as lead curriculum developer. Support curriculum development were provided by Allyson Joyner and William Wilson, OIC staff instructors. Project Director was Jeffrey Woodyard. Victoria Hoffman served as project advisor and workplace task analysis coordinator.

Permanent copies of this project can be found at

AdvancE
PDE Resource Center
333 Market Street - 11th Floor
Harrisburg, PA 17126-0333
717-783-9192

Western Pennsylvania Adult
Literacy Resource Center
5347 William Flynn Highway
Route 8
Gibsonia, PA 15044
412-443-7821

Statement of Problem:

Entry level workers in the Central Services Prep department needed to improve their basic workplace literacy skills as well as understand the relationship of what they did on their job to the success of the hospital as a whole. Instructional material had to be presented in a way that it could be used in the classroom by a facilitator/instructor as well as by learners who preferred independent or homebound study.

Goals and Objectives:

The overall goal of this project was to develop a workplace specific curriculum for central service prep workers. In the participating hospital these workers were considered entry level workers. As entry level workers they normally possessed a high school diploma or GED. However, it was not mandatory that workers be high school graduates. For this project approximately 90% of the workers possessed a high school diploma or GED certificate.

The specific project objectives were:

- to perform a task analysis on the hospital workers
- to review and evaluate available instructional materials and to develop additional materials as needed
- to design and write a curriculum
- to test the curriculum on hospital workers and to modify the curriculum as needed
- to disseminate the curriculum on a state-wide level

Procedures:

The project consisted of five activity components which mirrored the project objectives.

Objective 1

The first activity component was designed to assess the needs of the Central Services Prep workers and hospital management. To this end, a task analysis was performed. In addition to performing a task analysis, a needs assessment was performed. Both the needs assessment and the task analysis were performed by Victoria Hoffman. Ms. Hoffman has performed similar assessments for workplace projects.

The purpose of the task analysis was to determine what basic literacy skills were required by the workers to adequately perform their jobs. The purpose of the needs assessment was to determine what the project expectations were for the workers, hospital management, and OIC instructors.

To perform the task analysis, Ms. Hoffman talked directly to hospital staff responsible for supervising central service prep workers; she talked with instructional staff; and she talked with central service prep workers. Part of the task analysis included following central service prep workers on their jobs to assess what specific literacy skills were used frequently on their jobs. In addition, during the task analysis process, work-related materials such as charts, diagrams, inventory sheets, and other documents used by the workers were collected and reviewed. These documents aided in determining what literacy skills and what topic areas needed to be addressed in the curriculum.

The needs assessment was an informal attempt to ascertain from each partner's perspective what general topic areas and literacy skill areas needed to be addressed in the curriculum. After the needs assessment was completed, the following areas were generally agreed upon as being significant enough to include:

<u>Topic Areas:</u>

basic microbiology
soaps and detergents
cleaning processes
wrapping and packaging
equipment care and maintenance

<u>Skill Areas:</u>

vocabulary development
reading comprehension
study skills
following directions
basic science concepts
basic math skills

Objective 1 Results

After the project began, it became apparent that the scope of the curriculum as determined by the needs assessment was too large. The project implementor, with input from hospital staff and the instructor, determined that focus had to be narrowed. The hospital wanted the workers to become familiar with basic general principals that involved the sterilization process. The person who completed the task analysis felt that this could be accomplished best if the workers knew more about why they were required to complete certain tasks on their job.

The final result was that basic math skills (used on a limited basis), following directions, and study skills were de-emphasized in favor of vocabulary development, improving reading skills, and basic science concepts.

The resulting curriculum attempts to deliver the message of biology, sterilization, wrapping, and cleaning in a way that is both familiar to the worker on the job and practical to the learner in that it often refers to "real-life" situations.

Objective 2

The project implementor reviewed current materials available to the hospital workers. While the hospital had no formal curriculum, it did have an array of materials that were available for the workers to use as reference materials. Much of the material was designed and presented in a straightforward factual way. No effort was made to relate the instructional material to the learner's life style or experiences. The majority of material dealt strictly with memorizing facts and discrete knowledge. Some of the material reviewed was used by hospital workers to prepare for a state sanctioned Central Services Prep license. The reading levels required for the materials reviewed was well above the average 8th-grade of the learners.

The project implementor contacted other local hospital to gather additional information used to train central service prep workers. Several purveyors of medical equipment and supplies were contacted as well. These companies were particularly helpful in providing pictures of equipment and supplies. These pictures proved useful in helping learners associate the pieces of equipment for which they were responsible with the names of equipment.

Objective 2 Results

After compiling and reviewing available instructional resources, the project implementor decided to avoid having the learners try to memorize random facts and the names of pieces of equipment. Most of the workers in this project were actually aware of the names of the equipment. What the workers lacked was knowledge of the reasons behind the steps and actions that they took each day to sterilize the equipment.

The project implementor began to write situational stories and anecdotes that the workers would hopefully relate to their job. The stories and anecdotes covered the agreed upon basic topic areas that resulted from the needs assessment. The skills needed to successfully complete these "lessons" included those skill areas deemed most important by the needs assessment.

Objective 3

After completing objective two, the project implementor began the task of designing the curriculum format, developing a pre/post test, and creating study materials. This time consuming process involved sifting through the instructional resources and trying to understand the concepts of sterilization through the eyes of both the hospital management and the Central Services Prep employee.

The project implementor narrowed down the scope of the curriculum to the following lessons: **a)** microbiology, **b)** soaps and detergents, **c)** cleaning patient supplies, **d)** cleaning machines, **e)** packaging, **f)** safety, **g)** general biology, and **h)** infection. The lessons are not designed to be presented in any special order. The learner can decide what topics are of interest to him/her and in what order he/she would like to complete the lessons. Each lesson is self-contained and does not rely on any other lessons for prior knowledge.

The pre/post test (included in the final curriculum packet) was used to give the instructor a general idea of which workers were familiar with general operating procedures as they related to the curriculum topic areas. The pre/post test was also used to help the instructor identify those workers whose knowledge of work-specific vocabulary needed improvement.

Objective 3 Results

In deciding on the topic areas to be presented for this project, the project implementor made a conscious effort to exclude having learners memorize the names of surgical equipment and instruments. The number of pieces of equipment that each Central Services Prep worker comes in contact with prohibited any effort to economically and efficiently present lessons that would cover them all.

The project implementor identified that what would be helpful for the entry level workers for whom this project was designed would be picture flash cards that simply showed the name of the surgical tool on one side of the card and the name of the tool on the other side of the card. (Examples of these types of flash cards are included in the curriculum packet.)

Objective 4

Under this objective, the project implementor, with the help of an instructor, tested the curriculum on several Central Services Prep workers. Since the hospital was not able to release the students in total for a structured class, lessons were presented in several ways. First, students who attended ABE/GED classes at the local hospital and who worked in the Central Services department were asked to participate in reviewing the lessons. Second, Central Services Prep workers who had completed class were identified and asked to participate as homebound learners. In addition, hospital staff gave constructive input regarding the curriculum content.

The project instructor noted the motivation level of the learners, when possible; the time needed to complete the lessons; content area that needed further development or contained excess information; and the scores of the workers that completed the lessons. Learners were interviewed to determine these factors as well.

The results of the teacher and learner assessments resulted in modifications of the lessons.

Objective 4 Results

A major disappointment with this project was the missed opportunity to present the lessons to students as a group. The hospital was unable to release the workers as originally planned. As a result, workers received varying degrees of instructional support, and they, themselves were able to offer varying degrees of feedback.

One of the concerns of both hospital management and workers was the limited opportunities for entry-level workers to receive structured classroom training. This project was not able to address that concern.

Objective 5

Under this objective, the project implementor wrote the final report, the curricula/ lessons for Central Services Prep workers, developed a pre/post test assessment, and compiled a list of activities and relevant vocabulary needed to complete the lessons. This information was disseminated through the normal channels for 353 projects, i.e., AdvancE and the Western Pennsylvania Adult Literacy Resource Center.

Objective 5 Results

Additional copies of the final products were disseminated to workers in the Central Services Prep department of the cooperating hospital.

Project Evaluations

For this project, the project implementor developed a pre/post assessment. The assessment was not designed to identify which learners would best benefit from instruction. The assessment instrument was merely a tool used by the project implementor and the instructor to identify learner weaknesses in Central Services Prep procedures and vocabulary. Since the students who used the instructional materials were already part of a larger group (ABE/GED students), a standardized test had been administered. The TABE test was used for this purpose.

Hospital staff was interviewed at the conclusion of this project. Initial interviews indicated that the level of interest in providing specific workplace literacy opportunities to hospital workers remains high. Immediate supervisor of the learners stated that workers responded positively to the lessons and activities associated with the class.

Dissemination

This report and the products developed under this grant have been disseminated through AdvancE and the Western Pennsylvania Adult Literacy Resource Center.

Conclusions

The project resulted in an effective and easy to use set of lessons for entry level central service prep workers to use in either a classroom or home setting. It is recommended that others who wish to replicate this project narrow the focus of the curriculum to a single aspect of the worker's job tasks such as the sterilization process or packaging rather than try to address all phases and job tasks of the Central Services Prep worker.